serving traffic channel has degraded marginally to indicate that re-aligned of the narrowbeam radiation pattern is warranted. In this way, oscillation of the radiation pattern of the traffic channel (or the pulsing of the width of the narrowbeam traffic channel, for example) from either the base station or the communication unit can be used to provide information for subsequent use in beamforming of the traffic channel. Again, the feedback may take the form of a report on BER or received signal strength information, or can be more complex (e.g. containing correlation information) and detailed in nature, as will be understood. Indeed, it; is also contemplated that a beamformed channel directed from one unit to another can be analysed (in terms of a measurable signal parameter) at the receiving unit, whereafter the receiving unit provides feedback to the transmitting unit with regard to the measured signal parameter. A general logical flow for this alternative process can be seen by viewing FIG. **2***b* in a generic sense, and this figure should not therefore be construed as limiting with respect to defining solely a BCCH control algorithm.

The present invention therefore advantageously provides a communication system having reduced interference.

What is claimed is:

1. A method of establishing radio communication between a communication unit and a base station having an array of antenna elements, the method comprising the steps of:

receiving a system access request at each base station of a plurality of base stations, wherein each base station of the plurality of base stations comprises an antenna array;

making signal parameter measurements of the access request received by each base station of the plurality of base stations;

determining a rank order of signal parameter measurements with respect to the plurality of base stations;

selecting a base station to serve the communication unit based on the rank order to produce a serving base station;

at the serving base station, in response to the received system access request, forming a first narrowbeam control channel to the communication unit and transmitting system control information to the communication unit on the first narrowbeam control channel, the system control information transmitted from the array of antenna elements and arranged to identify a narrowbeam communication resource for use in the radio communication;

at the serving base station, receiving a request for assignment of a new narrowbeam control channel;

in response to the request for assignment of a new narrowbeam control channel, instructing at least one non-serving base station of the plurality of base stations to prepare to transmit narrowbeam control channels at the communication unit;

at the at least one non-serving base station of the plurality of base stations, in response to receiving an instruction to prepare to transmit, notifying the serving base station of channel assignment information pertaining to a subsequent transmission of the narrowbeam control channels at the communication unit; and

at the serving base station, in response to receiving the channel assignment information from the at least one non-serving base station, notifying the communication unit of the channel assignment information on the first narrowbeam control channel.

2.The method of claim **1**, further comprising the step of, at the serving base station, periodically altering a beam pattern of the first narrowbeam control channel.

3. The method of claim **2**, wherein the beam pattern of the first narrowbeam control channel is oscillated about an expected position of the communication unit.

4. The method of claim **2**, wherein a width of the beam pattern of the first narrowbeam control channel is pulsed.

5. The method of claim **2**, further comprising the step of, at the serving base station, transmitting beam pattern information on the first narrowbeam control channel identifying how the beam pattern of the first narrowbeam control channel is altering.

6. The method of claim **1**, further comprising the steps of:

determining a base station handoff candidate from among the at least one non-serving base stations; and

receiving, by the base station handoff candidate and via a narrowbeam control channel associated with the base station handoff candidate, a signal to initiate handoff of the radio communication.

7. The method of claim **1**, further comprising the steps of:

storing base station location information and communication unit location information; and

by each base station of the plurality of base stations, accessing the base station location information and the communication unit location information to beamform, during handoff of the radio communication, a narrowbeam control channel in a direction of the communication unit.

8. A radio communication system for supporting radio communication between a communication unit and at least one of a plurality of base stations, the system comprising:

a plurality of base stations, wherein each base station of the plurality of base stations comprises:

an array of antenna elements;

a means, responsive to the array of antenna elements, for receiving and processing a system access request;

a means, responsive to the system access request, for assigning and generating system control information identifying a narrowbeam communication resource for use in a radio communication with the communication unit;

a means, coupled to the array of antenna elements, for forming and transmitting a first narrowbeam control channel to the communication unit in response to the received system access request;

a means for making signal parameter measurements of the access request received at each base station of the plurality of base stations;

a means for determining a rank order of signal parameter measurements with respect to the plurality of base stations;

a means for selecting a serving base station to serve the communication unit from the rank order;

a means at the serving base station for receiving a request for assignment of a new narrowbeam control channel;

a means for instructing, in response to the request for assignment of a new narrowbeam control channel, at least one non-serving base station of the plurality of base stations to prepare to transmit narrowbeam control channels at the communication unit;